

REMARKS

In the Office Action, the Examiner rejected claims 1-20 under 35 U.S.C. § 103(a) as being unpatentable over Loboda (US PGPUB 20020137323 A1) in view of Sato (US Patent 6,306,765 B1). Applicants respectfully traverse the rejections.¹ A *prima facie* case of obviousness has not been established.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). M.P.E.P. § 2142, 8th Ed., Rev. 4 (October 2005), p. 2100-134.

A *prima facie* case of obviousness has not been established because, among other things, neither Loboda, nor Sato, taken alone or in combination, teaches or suggests each and every element of Applicant's independent claims 1, 12, and 17.

Regarding the 35 U.S.C. § 103(a) rejection of claim 1, Loboda discloses a barrier using reactive gases inside a reactor. However, Loboda does not teach Applicants' claimed "carrying the substrate into a second chamber other than the first chamber," "discharging a rare gas in the second chamber," and "forming a second insulating film

¹ The Office Action may contain statements characterizing the related art, case law, and claims. Regardless of whether any such statements are specifically identified herein, Applicant declines to automatically subscribe to any statements in the Office Action.

... above the first insulating film" as recited in independent claim 1. The Examiner applied Sato in an attempt to cure Loboda's deficiencies.

Sato discloses a method of depositing a high melting metal film and a metal nitride or oxynitride film to cover an insulating layer. Sato, however, does not cure Loboda's deficiencies in that Sato is also silent as to the disclosure of "forming a second insulating film including silicon, carbon, oxygen, and hydrogen above the first insulating film after the discharging the rare gas" as recited in claim 1. Sato's use of first and second chambers to deposit first film, which is "a metal film with the metal selected from a group consisting of titanium, tungsten, molybdenum, hafnium, and zirconium" and second film, "said second film being selected from a group consisting of a metal nitride film and a metal oxynitride film (Sato, Col. 7, line 26 - Col. 8, line 19)," clearly does not constitute the claimed "first insulating film including silicon, carbon, nitrogen, and hydrogen" and "second insulating film including silicon, carbon, oxygen, and hydrogen" as recited in claim 1.

Moreover, Applicants note that Sato, like Loboda, is also entirely silent as to the claimed "discharging a rare gas in the second chamber" as recited in claim 1. Therefore, neither Loboda, nor Sato, taken alone or in combination, teaches or suggests each and every element of Applicants' independent claim 1. Independent claims 1 is allowable, and claims 2-11 are allowable at least due to their dependence from claim 1.

Similarly, regarding the 35 U.S.C. § 103(a) rejection of claim 12 and 17, although of different scope, Loboda and Sato, either taken alone or in combination, fail to teach or suggest each and every element of Applicants' claims 12 and 17. Both references

are silent as to the claimed "first insulating film including silicon, carbon, nitrogen, and hydrogen" and "second insulating film including silicon, carbon, oxygen, and hydrogen" as recited in claims 12 and 17.

As to the 35 U.S.C. § 103(a) rejection of claim 17, Applicants note that, in addition to the reasons set forth above, both Loboda and Sato are silent as to any disclosure of "exposing the substrate in a humidified atmosphere including H₂O" and "heating the substrate after exposing the substrate" as recited in claim 17. Therefore, independent claims 12 and 17 are allowable, and claims 13-16 and 18-20 are allowable at least due to their dependence from allowable base claims 12 and 17.

In view of the foregoing remarks, Applicants respectfully request reconsideration and reexamination of this application and withdrawal of the rejections. Pending claims 1-20 are in condition for allowance, and Applicant requests a favorable action.

If there are any remaining issues or misunderstandings, Applicant requests the Examiner telephone the undersigned representative to discuss them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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